

NOV 01 2004

FAX TRANSMITTAL COVER SHEET

CONLEY ROSE, P.C.
600 Travis, Suite 7100
Houston, Texas 77002
Fax Number: (713) 238-8008
Telephone Number: (713) 238-8000

ORIGINAL WILL FOLLOW VIA:

<input type="checkbox"/>	MAIL
<input type="checkbox"/>	INTERNATIONAL AIRMAIL
<input type="checkbox"/>	COURIER
<input checked="" type="checkbox"/>	WILL NOT FOLLOW
<input type="checkbox"/>	HAND DELIVERY
<input type="checkbox"/>	WITH ENCLOSURE(S)
<input type="checkbox"/>	WITHOUT ENCLOSURE(S)

PLEASE DELIVER THE FOLLOWING PAGES IMMEDIATELY TO:

NAME: EXAMINER E. T. SHAFFER, GROUP ART UNIT 3623

FIRM: U.S. PATENT AND TRADEMARK OFFICE

CITY: ALEXANDRIA, VIRGINIA

FAX NO: (703) 872-9306

REMARKS: Serial No. 09/524,140, filed 03/10/2000
Attached hereto is a Reply Brief (4 p., in triplicate) for filing with the U.S. Patent and Trademark Office. Please acknowledge receipt of this facsimile.

Total Number of Pages (Including This One): FIFTEEN (15)

FROM: Alan D. Christenson, Direct Dial No. (713) 632-1615

DATE: November 1, 2004

CLIENT/MATTER NO. 10991147-1 (2162-18200)

**IF YOU DO NOT RECEIVE ALL THE PAGES,
PLEASE CALL BACK AS SOON AS POSSIBLE.**

This facsimile, and the information it contains, is intended to be a confidential communication only to the person or entity to whom it is addressed. If you have received this facsimile in error, please notify us by telephone at the above telephone number and return the original to this office by mail.

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

ORIGINAL

PATENT APPLICATION
ATTORNEY DOCKET NO. 10991147-1

RECEIVED
CENTRAL FAX CENTER
NOV 01 2004

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Qiming CHEN et al.

Confirmation No.: 5742

Application No.: 09/524,140

Examiner: E. T. Shaffer

Filing Date: 03/10/2000

Group Art Unit: 3623

Title: DISTRIBUTED OLAP-BASED ASSOCIATION RULE GENERATION METHOD AND SYSTEM

Mail Stop Appeal Brief-Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith in *triplicate* is the Reply Brief with respect to the Examiner's Answer mailed on 08/30/2004. This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new grounds of rejection.)

No fee is required for filing of this Reply Brief.

If any fees are required please charge Deposit Account 08-2025.

() I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.
Date of Deposit: _____

OR

(X) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number on (703) 872-8308 11/01/2004

Number of pages: 14

Typed Name: Colleen F. Brown

Signature: 

Respectfully submitted,

Qiming CHEN et al.

By 

Alan D. Christenson

Attorney/Agent for Applicant(s)

Reg. No. 54,036

Date: 11/01/2004

Telephone No.: (713) 238-8000

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

COPY

PATENT APPLICATION
ATTORNEY DOCKET NO. 10991147-1

RECEIVED
CENTRAL FAX CENTER

NOV 01 2004

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Qiming CHEN et al.

Confirmation No.: 5742

Application No.: 09/524,140

Examiner: E. T. Shaffer

Filing Date: 03/10/2000

Group Art Unit: 3623

Title: DISTRIBUTED OLAP-BASED ASSOCIATION RULE GENERATION METHOD AND SYSTEM

Mail Stop Appeal Brief-Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith in *triplicate* is the Reply Brief with respect to the Examiner's Answer mailed on 08/30/2004. This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new grounds of rejection.)

No fee is required for filing of this Reply Brief.

If any fees are required please charge Deposit Account 08-2025.

() I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.
Date of Deposit: _____

OR

(X) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number on (703) 872-9306 11/01/2004

Number of pages: 14

Typed Name: Colleen F. Brown

Signature: 

Respectfully submitted,

Qiming CHEN et al.

By 

Alan D. Christenson

Attorney/Agent for Applicant(s)

Reg. No. 54,036

Date: 11/01/2004

Telephone No.: (713) 238-8000

NOV 01 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants:	Qiming CHEN et al.	§	Confirmation No.:	5742
Serial No.:	09/524,140	§	Group Art Unit:	3623
Filed:	03/10/2000	§	Examiner:	E.T. Shaffer
For:	Distributed OLAP-Based Association Rule Generation Method And System	§	Docket No.:	10991147-1

REPLY BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: November 1, 2004

Sir:

Appellants hereby submit this Reply Brief in response to the Examiner's Answer dated August 30, 2004, in connection with the above-identified application.

In the Examiner's Answer, the Examiner states that the Summary of Invention in Appellants' Appeal Brief "is deficient because it fails to teach many of the key features of the claimed invention" (see Examiner's Answer, page 3, part 5). Appellants disagree and submit that the Summary includes "a concise explanation of the invention defined in the claims involved in the appeal" as required under 37 CFR 1.192. The Examiner seems to suggest that all claim limitations must be discussed in the Summary. However, 37 CFR 1.192 makes no such requirement. A Summary that addresses all the claim limitations that are pertinent to patentability could hardly be concise as required. The Summary submitted with the Appeal Brief is concise, but is not deficient as suggested by

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

the Examiner. At any rate, an updated Summary of Invention including figure numbers is provided below.

SUMMARY

As discussed in Appellants' Summary of Invention, the invention provides a processing system that comprises a minimum of two layers of data warehouse/OLAP stations: LDOSs (110, 130) and a GDOS (150). The LDOSs (110, 130) are responsible for local data mining and summarization, while the GDOS (150) is responsible for merging and mining the input data from the LDOSs (110, 130), and for providing mining results to LDOSs (110, 130) for business applications. See Figure 1 and page 7, line 11 - page 9, line 3. The GDOS (150) provides mining results to LDOSs (110, 130) via a feedback process (160). See Figure 1, page 8, lines 1-4 and page 9, lines 12-23.

The processing system may be used to generate scoped association rules (159). See Figure 1, Figure 4 and page 17, line 10 - page 19, line 13. For exemplary purposes, consider the scoped associated $A \rightarrow B$ [scope = customer, region = CA, timeframe = two months]. This exemplary scoped association rule represents the trend that a customer who purchased item A also purchased item B in the state of California within the past two months. Scoped association rules are defined over a particular population or set of populations, thereby facilitating the cooperative mining of association rules between the GDOS (150) and the LDOSs (110, 130). See Figure 1 and page 17, line 10 - page 18, line 20.

The data organization provided by embodiments of the invention is described using multidimensional cubes. For example, embodiments of the invention may provide volume cubes (210), association cubes (230), population cubes (240), base cubes (220), confidence cubes (260) and support cubes (250). See Figure 6 and page 19, line 20 - page 22, line 7.

CLAIM GROUPS

With regards to the grouping of the claims, the Examiner states that "there are no additional limitations to explain why the claims are patentably distinct" (see

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

Examiner's Answer, page 4, first paragraph). Appellants disagree and submit that the Arguments section of the Appeal Brief "explains why the claims of the group are believed to be separately patentable" as required under 37 CFR 1.192. Specifically, the Arguments section includes a separate argument that addresses why each claim group is patentable over the references cited by the Examiner. Also, the Grouping of Claims section in Appellants' Appeal Brief identifies claim 26 as a separate claim group. However, it is claim 28 and not claim 26 that is identified and argued in the Arguments section of Appellants' Appeal Brief. Appellants clarify that the claims groups to be considered separately for purposes of Appeal are: (1) claims 1-7 and 26-27; (2) claims 8-16; (3) claims 17-25; and (4) claims 28-29.

In the Appeal Brief, Appellants argued that the patentability of claim 1 is based, in part, on "cubes" that "comprise a plurality of bases from distinct data sources" and on "scoped association cubes." In contrast, Appellants argued that the patentability of claims 8, 17 and 28 is based, in part, on "scoped association rules" and on distributing processing to local stations (or local servers) and to at least one global station (or global server). Additionally, claim 17 requires "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations." Neither Megiddo nor Castelll teaches or suggests "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations" as required in claim 17. For at least this additional reason, the Examiner erred in rejecting claim 17 and its dependent claims.

Appellants therefore respectfully request that the Examiner's rejections be reversed, and the claims set to issue.

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

under 37 CFR 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2026.

Respectfully submitted,



Alan D. Christenson
PTO Reg. No. 54,036
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
AGENT FOR APPELLANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

RECEIVED
CENTRAL FAX CENTER
NOV 01 2004

COPY

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
 BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants:	Qiming CHEN et al.	§	Confirmation No.:	5742
Serial No.:	09/524,140	§	Group Art Unit:	3623
Filed:	03/10/2000	§	Examiner:	E.T. Shaffer
For:	Distributed OLAP-Based	§	Docket No.:	10991147-1
	Association Rule	§		
	Generation Method And	§		
	System	§		

REPLY BRIEF

Mall Stop Appeal Brief – Patents
 Commissioner for Patents
 PO Box 1450
 Alexandria, VA 22313-1450

Date: November 1, 2004

Sir:

Appellants hereby submit this Reply Brief in response to the Examiner's Answer dated August 30, 2004, in connection with the above-identified application.

In the Examiner's Answer, the Examiner states that the Summary of Invention in Appellants' Appeal Brief "is deficient because it fails to teach many of the key features of the claimed invention" (see Examiner's Answer, page 3, part 5). Appellants disagree and submit that the Summary includes "a concise explanation of the invention defined in the claims involved in the appeal" as required under 37 CFR 1.192. The Examiner seems to suggest that all claim limitations must be discussed in the Summary. However, 37 CFR 1.192 makes no such requirement. A Summary that addresses all the claim limitations that are pertinent to patentability could hardly be concise as required. The Summary submitted with the Appeal Brief is concise, but is not deficient as suggested by

COPY

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

the Examiner. At any rate, an updated Summary of Invention including figure numbers is provided below.

SUMMARY

As discussed in Appellants' Summary of Invention, the invention provides a processing system that comprises a minimum of two layers of data warehouse/OLAP stations: LDOSs (110, 130) and a GDOS (150). The LDOSs (110, 130) are responsible for local data mining and summarization, while the GDOS (150) is responsible for merging and mining the input data from the LDOSs (110, 130), and for providing mining results to LDOSs (110, 130) for business applications. See Figure 1 and page 7, line 11 - page 9, line 3. The GDOS (150) provides mining results to LDOSs (110, 130) via a feedback process (160). See Figure 1, page 8, lines 1-4 and page 9, lines 12-23.

The processing system may be used to generate scoped association rules (159). See Figure 1, Figure 4 and page 17, line 10 - page 19, line 13. For exemplary purposes, consider the scoped associated $A \rightarrow B$ [scope = customer, region = CA, timeframe = two months]. This exemplary scoped association rule represents the trend that a customer who purchased item A also purchased item B in the state of California within the past two months. Scoped association rules are defined over a particular population or set of populations, thereby facilitating the cooperative mining of association rules between the GDOS (150) and the LDOSs (110, 130). See Figure 1 and page 17, line 10 - page 18, line 20.

The data organization provided by embodiments of the invention is described using multidimensional cubes. For example, embodiments of the invention may provide volume cubes (210), association cubes (230), population cubes (240), base cubes (220), confidence cubes (260) and support cubes (250). See Figure 6 and page 19, line 20 - page 22, line 7.

CLAIM GROUPS

With regards to the grouping of the claims, the Examiner states that "there are no additional limitations to explain why the claims are patentably distinct" (see

COPY

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

Examiner's Answer, page 4, first paragraph). Appellants disagree and submit that the Arguments section of the Appeal Brief "explains why the claims of the group are believed to be separately patentable" as required under 37 CFR 1.192. Specifically, the Arguments section includes a separate argument that addresses why each claim group is patentable over the references cited by the Examiner. Also, the Grouping of Claims section in Appellants' Appeal Brief identifies claim 26 as a separate claim group. However, it is claim 28 and not claim 26 that is identified and argued in the Arguments section of Appellants' Appeal Brief. Appellants clarify that the claims groups to be considered separately for purposes of Appeal are: (1) claims 1-7 and 26-27; (2) claims 8-16; (3) claims 17-25; and (4) claims 28-29.

In the Appeal Brief, Appellants argued that the patentability of claim 1 is based, in part, on "cubes" that "comprise a plurality of bases from distinct data sources" and on "scoped association cubes." In contrast, Appellants argued that the patentability of claims 8, 17 and 28 is based, in part, on "scoped association rules" and on distributing processing to local stations (or local servers) and to at least one global station (or global server). Additionally, claim 17 requires "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations." Neither Megiddo nor Castelli teaches or suggests "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations" as required in claim 17. For at least this additional reason, the Examiner erred in rejecting claim 17 and its dependent claims.

Appellants therefore respectfully request that the Examiner's rejections be reversed, and the claims set to issue.

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned

COPY

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

under 37 CFR 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



Alan D. Christenson
PTO Reg. No. 54,036
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
AGENT FOR APPELLANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

RECEIVED
CENTRAL FAX CENTER
NOV 01 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants:	Qiming CHEN et al.	§	Confirmation No.:	5742
Serial No.:	09/524,140	§	Group Art Unit:	3623
Filed:	03/10/2000	§	Examiner:	E.T. Shaffer
For:	Distributed OLAP-Based Association Rule Generation Method And System	§	Docket No.:	10991147-1

REPLY BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: November 1, 2004

Sir:

Appellants hereby submit this Reply Brief in response to the Examiner's Answer dated August 30, 2004, in connection with the above-identified application.

In the Examiner's Answer, the Examiner states that the Summary of Invention in Appellants' Appeal Brief "is deficient because it fails to teach many of the key features of the claimed invention" (see Examiner's Answer, page 3, part 5). Appellants disagree and submit that the Summary includes "a concise explanation of the invention defined in the claims involved in the appeal" as required under 37 CFR 1.192. The Examiner seems to suggest that all claim limitations must be discussed in the Summary. However, 37 CFR 1.192 makes no such requirement. A Summary that addresses all the claim limitations that are pertinent to patentability could hardly be concise as required. The Summary submitted with the Appeal Brief is concise, but is not deficient as suggested by

COPY

Appl. No.: 09/524,140**Reply Brief dated November 1, 2004****Reply to Examiner's Answer of August 30, 2004**

the Examiner. At any rate, an updated Summary of Invention including figure numbers is provided below.

SUMMARY

As discussed in Appellants' Summary of Invention, the invention provides a processing system that comprises a minimum of two layers of data warehouse/OLAP stations: LDOSs (110, 130) and a GDOS (150). The LDOSs (110, 130) are responsible for local data mining and summarization, while the GDOS (150) is responsible for merging and mining the input data from the LDOSs (110, 130), and for providing mining results to LDOSs (110, 130) for business applications. See Figure 1 and page 7, line 11 - page 9, line 3. The GDOS (150) provides mining results to LDOSs (110, 130) via a feedback process (160). See Figure 1, page 8, lines 1-4 and page 9, lines 12-23.

The processing system may be used to generate scoped association rules (159). See Figure 1, Figure 4 and page 17, line 10 - page 19, line 13. For exemplary purposes, consider the scoped associated $A \rightarrow B$ [scope = customer, region = CA, timeframe = two months]. This exemplary scoped association rule represents the trend that a customer who purchased item A also purchased item B in the state of California within the past two months. Scoped association rules are defined over a particular population or set of populations, thereby facilitating the cooperative mining of association rules between the GDOS (150) and the LDOSs (110, 130). See Figure 1 and page 17, line 10 - page 18, line 20.

The data organization provided by embodiments of the invention is described using multidimensional cubes. For example, embodiments of the invention may provide volume cubes (210), association cubes (230), population cubes (240), base cubes (220), confidence cubes (260) and support cubes (250). See Figure 6 and page 19, line 20 - page 22, line 7.

CLAIM GROUPS

With regards to the grouping of the claims, the Examiner states that "there are no additional limitations to explain why the claims are patentably distinct" (see

COPY

Appl. No.: 09/524,140**Reply Brief dated November 1, 2004****Reply to Examiner's Answer of August 30, 2004**

Examiner's Answer, page 4, first paragraph). Appellants disagree and submit that the Arguments section of the Appeal Brief "explains why the claims of the group are believed to be separately patentable" as required under 37 CFR 1.192. Specifically, the Arguments section includes a separate argument that addresses why each claim group is patentable over the references cited by the Examiner. Also, the Grouping of Claims section in Appellants' Appeal Brief identifies claim 26 as a separate claim group. However, it is claim 28 and not claim 26 that is identified and argued in the Arguments section of Appellants' Appeal Brief. Appellants clarify that the claims groups to be considered separately for purposes of Appeal are: (1) claims 1-7 and 26-27; (2) claims 8-16; (3) claims 17-25; and (4) claims 28-29.

In the Appeal Brief, Appellants argued that the patentability of claim 1 is based, in part, on "cubes" that "comprise a plurality of bases from distinct data sources" and on "scoped association cubes." In contrast, Appellants argued that the patentability of claims 8, 17 and 28 is based, in part, on "scoped association rules" and on distributing processing to local stations (or local servers) and to at least one global station (or global server). Additionally, claim 17 requires "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations." Neither Megiddo nor Castelli teaches or suggests "feeding back said global profile cubes and association rules from said [global server] to said plurality of [local servers] for their business operations" as required in claim 17. For at least this additional reason, the Examiner erred in rejecting claim 17 and its dependent claims.

Appellants therefore respectfully request that the Examiner's rejections be reversed, and the claims set to issue.

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned

COPY

Appl. No.: 09/524,140
Reply Brief dated November 1, 2004
Reply to Examiner's Answer of August 30, 2004

under 37 CFR 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



Alan D. Christenson
PTO Reg. No. 54,036
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
AGENT FOR APPELLANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400